



S/N 09/111,978

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Leonard H. Bieman  
Serial No.: 09/111,978  
Filed: July 8, 1998  
Title: SCANNING PHASE MEASURING METHOD AND SYSTEM FOR AN  
OBJECT AT A VISION STATION

Examiner: Hoa Q. Pham  
Group Art Unit: 2877  
Docket: 139.045USR

# 16/D  
3/9/01  
Lurles

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

Commissioner for Patents  
Washington, D.C. 20231

Applicant has reviewed the Office Communication mailed January 30, 2001. Please  
amend the above-identified patent application as follows.

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**IN THE CLAIMS**

Please amend the claims as follows: (Status of all claims after Amendment filed  
10/30/2000, now with corrected underlining.)

1. [ Amended Once] A method for high speed, scanning phase measuring of an object at a  
vision station to develop physical information associated with the object, the method comprising  
the steps of:

projecting a pattern of imagable electromagnetic radiation with at least one projector;  
moving the object relative to the at least one projector at a substantially constant velocity  
at the vision station so as to scan the projected pattern of electromagnetic radiation across a  
surface of the object to generate an imagable electromagnetic radiation signal;

receiving the imagable electromagnetic radiation signal from the surface of the object  
with a detector having a plurality of separate detector elements which are substantially uniformly  
spaced;

maintaining the at least one projector and the pattern of imagable electromagnetic  
radiation and the detector in a substantially fixed relation to each other;

measuring an amount of radiant energy in the received electromagnetic radiation signal  
with the detector wherein each of the detector elements produce an image having a different  
phase of the same scanned surface based on the measurement; and

computing phase values and amplitude values for the different phases from the multiple  
images.